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Perrin

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[54] METHOD FOR THE CREATION OF ANIMATED GRAPHICS

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[56] References Cited

U.S. PATENT DOCUMENTS

| 725 |
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| /87 |
| 164 |
| 152 |
| 1 |

FOREIGN PATENT DOCUMENTS

2245807 1/1992 United Kingdom

OTHER PUBLICATIONS

Girard, "Interactive Design of 3D Computer Animated Legged Animal Motion" IEEE CG&A, Jun. 1987, pp. 39–51.

Wilhelms, J. "Using Dynamic Analysis for Realistic Animation of Articulated Bodies" IEEE CG&A, Jun. 87, pp. 12–23.

Wilhelms, J. "Toward Automatic Motion Control" IEEE CG&A, Apr. 1987, pp. 11–22.

Armstrong, W. et al., "Near Real Time Control of Human Figure Models" IEEE CG&A, Jun. 1987 pp. 52–61.

N. Badler et al., Articulated Figure Positioning by Multple Constraints, I.E.E.E. Computer Graphics and Applications, vol. 7, No. 6, Jun. 1987, New York, NY, pp. 28–38.

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[57] ABSTRACT

To create animated graphics, a first key position of a character is taken into a first setting and then a second key position of this character is taken into the same setting in keeping one and the same securing pivot for both key positions. For the second key position of the character, a second pivot is determined. The position of this second pivot in the first setting is measured for the first and then the second posture of the character. The position where the character is supposed to take support by the second pivot is defined by the intersection of the trajectory of this second pivot with a reference plane of the setting. It is shown that acting in this way prevents the slipping effects that are obtained, when no precautions are taken, with automatically animated pictures.

10 Claims, 4 Drawing Sheets

